

restricted to) polyoxyethylene alcohol's, polyoxyethylene isoalcohol, polyoxyethylene p-t-octyl phenol (Triton), polyoxyethylene nonylphenol, polyoxyethylene esters of fatty acids, polyoxyethylene sorbitol esters (Tween) and lipids. Negatively charged surfactants include (but not restricted to) di-(2-ethyl-hexyl) sodium sulfosuccinate (AOT), sodium
5 dodecylsulfate (SDS), sodium dodecylsulfonate, and sodium dodecyl-N-sarcosinate. The zwitterionic surfactant could contain anionic and cationic groups on the alpha and omega positions of a long aliphatic chain. For zwitterionic surfactants that contain both anionic and cationic groups on the alpha and omega positions of a long aliphatic chain, complex formation should be done under acidic conditions so that the surfactant can have
10 a positive charge that will interact with the nucleic acid. The anionic portion is neutralized by being protonated and therefore interacts with the non-aqueous phase. After formation of the complexes, the complexes are extracted into an aqueous solution containing a higher pH than the pH used to form the complexes.

Brief Description of the Drawings

FIG. 1. Circular dichroism spectra measured for samples of plasmid DNA added to a mixture of Brij30/TMP or DNA alone at 30°C. The ellipticity value for control samples prepared without DNA were subtracted from the experimental samples.

Detailed Description

A complex is described that is deliverable to a cell comprising inserting a nucleic acid or other cargo into a reverse micelle. The reverse micelle has the property to compact the
25 nucleic acid for easier delivery. The term deliverable means that the complex is capable of being delivered as defined in this specification.

A process for forming a negatively-charged, zwitterionic, or neutral complex for delivery to a cell, comprising forming a cationic reverse micelle using amphipathic molecules.

30 Then inserting a biologically active compound into the cationic reverse micelle.